

What is claimed is:

- 5 2) The composite sandwich of claim 19 wherein said multi-void core
 comprises a member selected form the group consisting of polymers and
 metals.
- 3) The composite sandwich of claim 2 wherein said multi-void core is
 fabricated from aluminum, copper or alloys of aluminum or copper.
- 10 4) The composite sandwich of claim 2 wherein said multi-void core is
 fabricated from a polymer, copolymer or mixture of polymers.
- 5) The composite sandwich of claim 2 wherein said multi-void core
 comprises an extrusion.
- 15 6) The composite sandwich of claim 2 wherein said layers of composite
 stiffening material comprise a member selected from the group consisting
 of metal matrix and polymer matrix composites.
- 20 7) The composite sandwich of claim 6 wherein said layers of composite
 stiffening material comprises a metal matrix composite.

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8) The composite sandwich of claim 2 wherein said core comprises an aluminum or aluminum alloy extrusion, and said layers of composite stiffening material comprise an aluminum metal matrix composite.

5 9) The composite sandwich of claim 8 wherein said aluminum metal matrix composite includes continuous ceramic fibers or ceramic particles.

10) The composite sandwich of claim 19 wherein said multi-void core comprises a micro, multi-void.

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11) The composite sandwich of claim 10 wherein said multi-void core comprises a member selected from the group consisting of polymers and metals.

15 12) The composite sandwich of claim 11 wherein said multi-void core is fabricated from aluminum, copper or alloys of aluminum or copper.

13) The composite sandwich of claim 11 wherein said multi-void core is fabricated from a polymer, copolymer or mixture of polymers.

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14) The composite sandwich of claim 11 wherein said multi-void core comprises an extrusion.

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15) The composite sandwich of claim 11 wherein said layers of composite stiffening material comprise a member selected from the group consisting of metal matrix and polymer matrix composites.

5 16) The composite sandwich of claim 15 wherein said layers of composite stiffening material comprises a metal matrix composite.

10 17) The composite sandwich of claim 11 wherein said core comprises an aluminum or aluminum alloy extrusion, and said layers of composite stiffening material comprise an aluminum metal matrix composite.

18) The composite sandwich of claim 17 wherein said aluminum metal matrix composite includes continuous ceramic fibers or ceramic particles.

15 19) A composite sandwich comprising:

A) a multi-void core having two planar surfaces and including a plurality of continuous, parallel, longitudinal channels; and

20 B) at least one layer of a composite stiffening material attached to each of said two planar surfaces.